M E M O R A N D U M

TO: Susan Sylvester, Director, Operations Control and Hydro Data Management Department

THROUGH: Dean Powell, Acting Director, Water Supply Department

FROM: SFWMD Staff Water Supply Advisory Team

DATE: May 18, 2010

SUBJECT: Water Supply Report

Groundwater levels all across the District decreased a bit this past week; nevertheless, most wells are at above-average levels expected for this time of year. In the Kissimmee Basin, both Floridan and Surficial wells are in their highest 10^{th} to 30^{th} percentiles of past water elevations. Canal stages in the Upper East Coast (UEC) ranged from 19.40 to 21.62 ft NGVD this week, well above the 14 ft agricultural cutoff level. Groundwater levels in most USGS wells in the UEC are in the highest 10^{th} percentiles of their recorded values for this time of year. In the Lower East Coast, wells in the United States Geological Survey (USGS) network are generally within the highest 10^{th} to 30^{th} percentile levels expected for this time of year.

The majority of Surficial aquifer and Lower Tamiami wells in the Lower West Coast (LWC) have levels well above average for this time of year. Sandstone aquifer levels are in the highest 10th to 30th percentile range throughout most the LWC, and in the median range in the Lehigh Acres area (eastern Lee County). The majority of the USGS Mid-Hawthorn aquifer wells remain at median levels. Figure 1 is a USGS map showing current conditions developed from a 7-day running average of daily recorded water levels compared to the statistical distribution of daily water levels for the site period of record for selected sites in southern Florida.

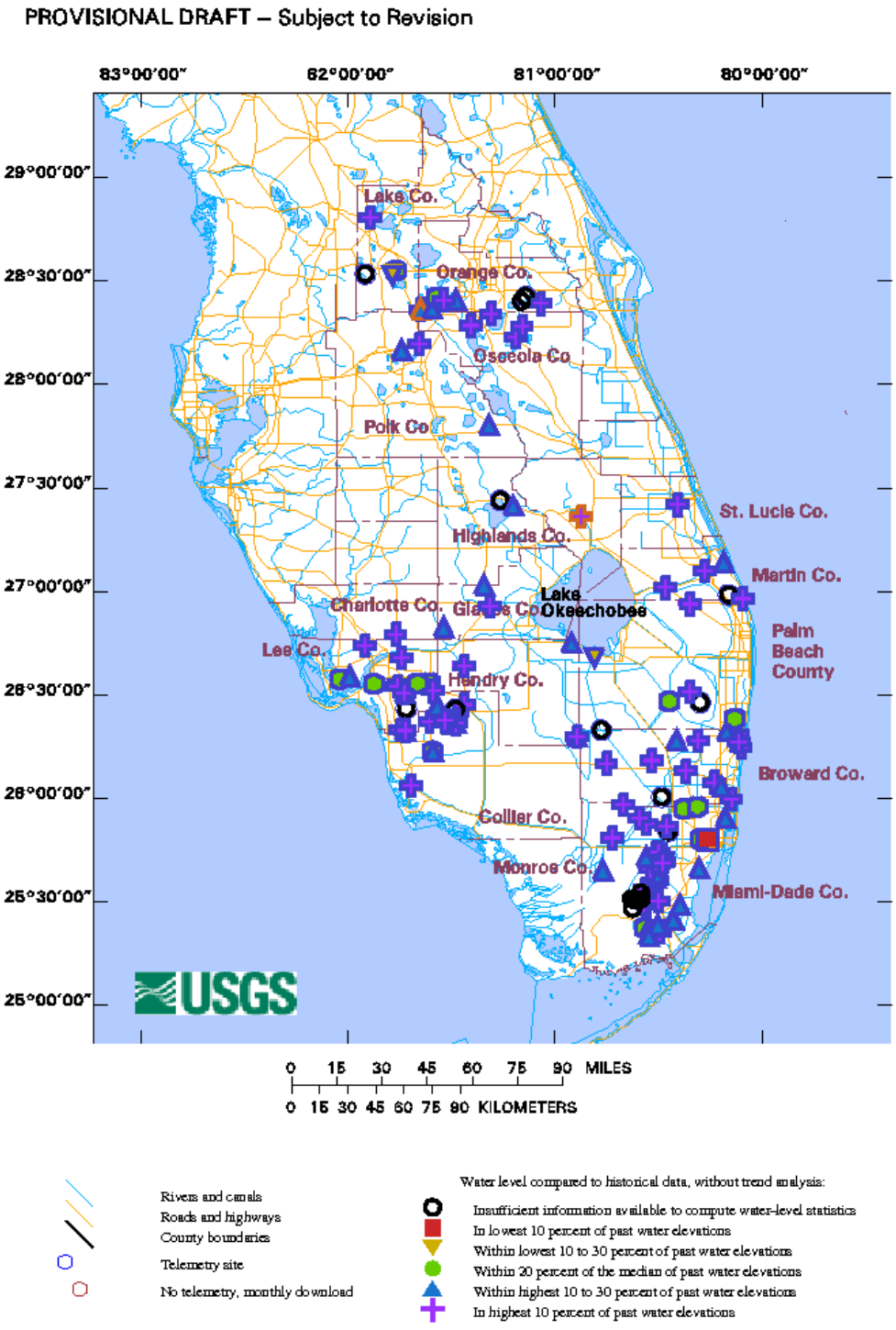

Figure 1. Current Water-level Conditions in South Florida (source: USGS, http://www.sflorida.er.usgs.gov/ddn_data/index.html)

All water supply risk indicators remain in the “low” risk category. The projected Lake Okeechobee (LOK) Stage for the next two months is in the Low Flow Sub-band. The Palmer Index for LOK Tributary Conditions has changed to “near normal”. The LOK Seasonal Net Inflow Forecast and the LOK Multi-Seasonal Net Inflow Forecast are both projected as “very wet”. The Climate Prediction Center’s Precipitation Outlook is projected as “below normal” for 1 month and “normal” for 3 months. The LEC service areas and Water Conservation Areas 1, 2 and 3 remain in the “low” risk category. Figure 2 summarizes the water supply risk indicators. Note the comment in Figure 2 regarding the stage at S11B in Water Conservation Area 2A. The current adaptive protocols guidelines provide that the risk indicator for WCA 2A is determined by the stage in the marsh at Gauge 2-17 when marsh stage is above 11.5 feet.

LORS2008 Implementation on 05/17/2010 (El Nino Condition):

Water Supply Department Technical Input

Water Supply Outlook:

District wide, Raindar rainfall 0.57” for the week ending 05/17/2010. Lake stage on 05/17/2010 is 14.64 ft, down 0.38 ft from last week.
The updated May 2010 SFWMM Position Analysis percentile graph and tracking chart for Lake Okeechobee show that the lake stage is likely to remain in the Low Flow Operational Band.
The LORS2008 tributary indices are classified as very wet. The PDSI indicates Near Normal condition and the LONIN is very wet. The classification is based on the wetter of the two.

Water Supply Risk Evaluation

Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Flow Sub-Band	L
	Palmer Index for LOK Tributary Conditions	1.23 (Near Normal)	L
	CPC Precipitation Outlook	1 month: Below Normal 3 months: Normal	L
	LOK Seasonal Net Inflow Forecast AMO warm/ENSO El Nino	3.99 ft (Very Wet)	L
	LOK Multi-Seasonal Net Inflow Forecast AMO warm/ENSO El Nino	6.32 ft (Very Wet)	L
WCAs	WCA 1: 3 Station Average (3 Station 1-7,1-8T, and 1-9 Average)	Above Line 1 (16.15 ft)	L
	WCA 2A: Site 2-17*	Above Line 1 (11.80 ft)	L
	WCA-3A: 3 Station Average (3 Station 63, 64, and 65)	Above Line1 (9.79 ft)	L
LEC	Service Area 1	Two days per week watering	L
	Service Area 2	Two days per week watering	L
	Service Area 3	Two days per week watering	L

* if S11B HW gauge were used for the WCA2A risk assessment, as recommended by the USACE WCA2 report, the risk would become “High”, as the S11B stage is currently 10.05ft (NGVD29)

Figure 2. Water Supply Risk Indicators